

REMARKS

In the Office Action, the Examiner rejected claims 1 – 17. By this paper, the Applicants hereby amend claims 1, 6, 11, 12, and 13 and add new claims 18 and 19 for clarification of certain features to expedite allowance of the present application. These amendments do not add any new matter. Upon entry of these amendments, claims 1-19 remain pending in the present application and are believed to be in condition for allowance. In view of the foregoing amendments and the following remarks, the Applicants respectfully request reconsideration and allowance of all pending claims.

Objection to the Specification

In the Office Action, the Examiner objected to description on page 1, line 1 as being superfluous. After reviewing page 1 of the present application, the Applicants do not agree with the Examiner's objection. In fact, the Applicants do not see the word "description" on page 1, line 1. The Applicants also reviewed the published application, and do not see any superfluous language on page 1, line 1. Regarding paragraph 13, the Applicants hereby amend the language as suggested by the Examiner. For these reasons, the Applicants respectfully request the Examiner withdraw the objection to the specification.

Claim Objections

In the Office Action, the Examiner objected to claims 12-17. The Applicants hereby amend claim 12 as suggested by the Examiner. For this reason, the Applicants respectfully request the Examiner withdraw the objection to the claims.

Claim Rejections under 35 U.S.C. § 102

In the Office Action, the Examiner rejected claims 1-3 under 35 U.S.C. § 102(b) as anticipated by Japanese patent 55-134,797, [hereinafter Shinjirou]. Applicants respectfully traverse this rejection.

Legal Precedent

First, the pending claims must be given an interpretation that is reasonable and consistent with the *specification*. See *In re Prater*, 415 F.2d 1393, 1404-05, 162 U.S.P.Q. 541, 550-51 (C.C.P.A. 1969) (emphasis added); see also *In re Morris*, 127 F.3d 1048, 1054-55, 44 U.S.P.Q.2d 1023, 1027-28 (Fed. Cir. 1997); see also M.P.E.P. §§ 608.01(o) and 2111. Indeed, the specification is “the primary basis for construing the claims.” See *Phillips v. AWH Corp.*, No. 03-1269, -1286, at 13-16 (Fed. Cir. July 12, 2005) (*en banc*). One should rely *heavily* on the written description for guidance as to the meaning of the claims. See *id.*

Second, if the Examiner relies on a theory of inherency, the extrinsic evidence must make clear that the missing descriptive matter is *necessarily* present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 49 U.S.P.Q.2d 1949 (Fed. Cir. 1999) (Emphasis Added). The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient. *Id.* In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). The Examiner, in presenting the inherency argument, bears the evidentiary burden and must adequately satisfy this burden. See *id.* Regarding functional limitations, the Examiner must evaluate and consider the functional limitation, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. See M.P.E.P. § 2173.05(g); *In re*

Swinehart, 169 U.S.P.Q. 226, 229 (C.C.P.A. 1971); *In re Schreiber*, 44 U.S.P.Q.2d 1429, 1432 (Fed. Cir. 1997). If the Examiner believes the functional limitation to be inherent in the cited reference, then the Examiner “must provide some evidence or scientific reasoning to establish the reasonableness of the examiner’s belief that the functional limitation is an inherent characteristic of the prior art.” *Ex parte Skinner*, 2 U.S.P.Q.2d 1788, 1789 (Bd. Pat. App. & Inter. 1986).

Third, the *drawings* of the cited reference must be evaluated for what they *reasonably disclose and suggest* to one of ordinary skill in the art. *In re Aslanian*, 590 F.2d 911, 200 U.S.P.Q. 500 (CCPA 1979). Arguments based on dimensions of the drawing features are of little value where the reference does not disclose specific dimensions or any indication of whether the drawings are to scale. *See Hockerson-Halberstadt, Inc. v. Avia Group Int’l*, 222 F.3d 951, 956, 55 U.S.P.Q.2d 1487, 1491 (Fed. Cir. 2000).

Fourth, it is improper for the Examiner to rely on the abstract rather than the underlying document itself, particularly in the case of foreign language references. *See Ex parte Jones*, 62 U.S.P.Q.2d 1206 (PTO Bd. App. 2001); see M.P.E.P. § 706.02. As noted by the Board of Patent Appeals and Interferences, the reliance on abstracts is problematic, because abstracts are often prone to erroneous or incomplete descriptions of the invention. “A proper examination under 37 C.F.R. § 1.104 should be based on the underlying documents and translations, where needed.” *Id.* As set forth in Section 706.02 of the Manual of Patent Examining Procedure, if a prior art reference is in a language other than English and the examiner seeks to rely on that document, a translation must be obtained so that the record is clear as to the precise facts the examiner is relying on in support of the rejection.

Fifth, as set forth in Section 706 of the Manual of Patent Examining Procedure, the goal of examination is to clearly articulate any rejection early in the prosecution

process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity. The Examiner should never overlook the importance of his or her role in allowing claims which properly define the invention. See M.P.E.P. § 706.

Shinjirou is missing features recited by independent claims 1.

Turning to the claims, the present independent claim 1 recites, *inter alia*, “the blade supports extend beyond the trailing edge of the S-shaped blade.”

First, the Applicants request a full English translation of Shinjirou in view of the legal precedent set forth above. The Applicants submit that the fully translated reference may provide additional support for the Applicants’ position that Shinjirou is missing certain features of the present claims and/or that Shinjirou teaches away from certain features or modifications. As set forth in Section 706.02 of the Manual of Patent Examining Procedure, if a prior art reference is in a language other than English and the examiner seeks to rely on that document, a translation must be obtained so that the record is clear as to the precise facts the examiner is relying on in support of the rejection.

Second, Shinjirou does not teach or suggest “the blade supports extend beyond the trailing edge of the S-shaped blade,” as recited by claim 1. In contrast, Figure 10 of Shinjirou seems to show that the element 5 is directly limited by elements 2 and 3. In other words, the element 5 is completely blocked in or closed by elements 2 and 3, such that it is incapable of extending beyond the elements 2 and 3. In view of this deficiency, among others, Shinjirou cannot support a *prima facie* case of anticipation of independent claim 1 and its dependent claims.

For at least these reasons, among others, the Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 102.

Claim Rejections under 35 U.S.C. § 103(a)

The Examiner rejected dependent claims 4-5 under 35 U.S.C. § 103(a) as unpatentable over Shinjirou in view of Weis (U.S. Patent No. 3,145,912, hereinafter Weis). In addition, the Examiner rejected claims 6-8 over Japanese patent 59-93,997 (hereinafter Takuo) in view of Young (U.S. Patent No. 4,806,833, hereinafter Young) and Shinjirou. The Examiner also rejected claims 9-17 in view of Shinjirou and Takuo among other references. The Applicants respectfully traverse these rejections.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d. 1430 (Fed. Cir. 1990). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). The Examiner must provide objective evidence, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d. 1430 (Fed. Cir. 2002). Moreover, a statement that the proposed modification would have been “well within the ordinary skill of the art” based on individual knowledge of the claimed elements cannot be relied upon to establish a *prima facie* case of obviousness without some *objective reason to combine* the teachings of the references. *Ex parte Levengood*, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993); *In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d.

1313, 1318 (Fed. Cir. 2000); *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 U.S.P.Q.2d 1161 (Fed. Cir. 1999).

When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983); M.P.E.P. § 2145. Moreover, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (CCPA 1959); *see* M.P.E.P. § 2143.01(VI). If the proposed modification or combination would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984); *see* M.P.E.P. § 2143.01(V).

Shinjiro and Weis, taken alone or in hypothetical combination, fail to teach or suggest features recited by independent claim 1 and its dependent claims.

Amended independent claim 1 recites, *inter alia*, “a second blade support offset from said first blade support by a distance along a central axis of rotation; and a plurality of S-shaped blades extending between and coupled to said first and said second blade

supports, ... and the blade supports extend beyond the trailing edge of the S-shaped blade.”

As discussed above, Shinjirou does not teach or suggest “the blade supports extend beyond the trailing edge of the S-shaped blade,” as recited by claim 1. In contrast, Figure 10 of Shinjirou seems to show that the element 5 is directly limited by elements 2 and 3. In other words, the element 5 is completely blocked in or closed by elements 2 and 3, such that it is incapable of extending beyond the elements 2 and 3. Furthermore, Weis does not obviate the deficiencies of Shinjirou.

In addition, the Shinjirou and Weis teach contrastingly different principles of operation, which would change if the references were hypothetically combined as suggested by the Examiner. As summarized above, a proposed modification or combination of references is entirely improper and insufficient to support a *prima facie* case of obviousness, where the proposed modification or combination would change the principle of operation of the cited reference or render the cited reference unsatisfactory for its intended purpose. For example, Shinjirou specifically teaches fixing element 5 between elements 2 and 3, wherein Weis discloses that blades 50 are fixed only to disk 45 but not wall 46. *See* Weis, Fig. 2, col. 2, lines 62-64; col. 3, lines 13-15. It would be improper to modify the configuration of elements 2, 3, and 5 of Shinjirou in view of the much different configuration of Weis.

For at least these reasons, among others, the Applicants respectfully request withdrawal of the foregoing combination the corresponding rejection of claims 4-5 under 35 U.S.C. § 103.

Takuo and Shinjirou (and other cited references), taken alone or in hypothetical combination, fail to teach or suggest features recited by independent claim 6 and its dependent claims.

Amended independent claim 6 recites, *inter alia*, “the blade supports extend beyond the trailing edge of the S-shaped blade.”

First, the Applicants request a full English translation of both Takuo and Shinjirou in view of the legal precedent set forth above. The Applicants submit that the fully translated references may provide additional support for the Applicants’ position that Takuo and Shinjirou are missing certain features of the present claims and/or that Takuo and Shinjirou teach away from one another. As set forth in Section 706.02 of the Manual of Patent Examining Procedure, if a prior art reference is in a language other than English and the examiner seeks to rely on that document, a translation *must* be obtained so that the record is clear as to the precise facts the examiner is relying on in support of the rejection.

Second, Takuo, Young, Shinjirou, Weis, and Litch do not teach or suggest, alone or in hypothetical combination, “the blade supports extend beyond the trailing edge of the S-shaped blade,” as recited by claim 6. As discussed above, Figure 10 of Shinjirou seems to show that the element 5 is directly limited by elements 2 and 3. In other words, the element 5 is completely blocked in or closed by elements 2 and 3, such that it is incapable of extending beyond the elements 2 and 3. Similarly, the other cited references fail to disclose these claim features.

For at least these reasons, among others, the Applicants respectfully request withdrawal of the rejections of claims 6-11 under 35 U.S.C. § 103.

Becerra, Taku, and Shinjirou (and other cited references), taken alone or in hypothetical combination, fail to teach or suggest features recited by independent claim 12 and its dependent claims.

Amended independent claim 12 recites, *inter alia*, “the blade supports extend beyond the trailing edge of the S-shaped blade.”

First, once again, the Applicants request a full English translation of both Takuo and Shinjirou in view of the legal precedent set forth above. The Applicants submit that the fully translated references may provide additional support for the Applicants’ position that Takuo and Shinjirou are missing certain features of the present claims and/or that Takuo and Shinjirou teach away from one another. As set forth in Section 706.02 of the Manual of Patent Examining Procedure, if a prior art reference is in a language other than English and the examiner seeks to rely on that document, a translation must be obtained so that the record is clear as to the precise facts the examiner is relying on in support of the rejection.

Second, Becerra, Takuo, Shinjirou, Weis, and Litch do not teach or suggest, alone or in hypothetical combination, “the blade supports extend beyond the trailing edge of the S-shaped blade,” as recited by claim 12. As discussed above, Figure 10 of Shinjirou seems to show that the element 5 is directly limited by elements 2 and 3. In other words, the element 5 is completely blocked in or closed by elements 2 and 3, such that it is incapable of extending beyond the elements 2 and 3. Similarly, the other cited references fail to disclose these claim features.

For at least these reasons, among others, the Applicants respectfully request withdrawal of the rejections of claims 12-17 under 35 U.S.C. § 103.

Improper Combination - Lack of Objective Evidence of Reasons to Modify/Combine

In addition, the Examiner has not shown the requisite motivation or suggestion to modify or combine the cited references to reach the present claims. As summarized above, the Examiner must provide objective evidence, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d. 1430 (Fed. Cir. 2002). In the present rejection, the Examiner combined the cited references based on various *conclusory and subjective statements*. See Office Action, pages 4-7 and 9-11. Accordingly, Applicants challenge the Examiner to produce *objective evidence* of the requisite motivation or suggestion to combine the cited references, or remove the foregoing rejection under 35 U.S.C. § 103.

New Claims

As noted above, the Applicants hereby add new claims 18-19 to specify certain features of the claimed subject matter. The cited references, taken alone or in hypothetical combination with one another, fail to teach or suggest the features recited in these claims.

New dependent claim 18 recites “the first and second blade supports are offset by a distance along a central axis of rotation.” Claim 18 depends from independent claim 6. First, the Applicants stress that claim 18 is allowable for the same reasons as discussed above with reference to independent claim 6. Again, Takuo, Young, Shinjirou, Weis, and Litch do not teach or suggest, alone or in hypothetical combination, “the blade supports extend beyond the trailing edge of the S-shaped blade,” as recited by claim 6. As discussed above, Figure 10 of Shinjirou seems to show that the element 5 is directly limited by elements 2 and 3. In other words, the element 5 is completely blocked in or closed by elements 2 and 3, such that it is incapable of extending beyond the elements 2 and 3. Similarly, the other cited references fail to disclose these claim features. Furthermore, the cited references, taken alone or in hypothetical combination, do not

teach or suggest the further recitation that “the first and second blade supports are offset by a distance along a central axis of rotation.” Accordingly, dependent claim 18 is believed to be in condition for allowance.

New independent claim 19 recites, *inter alia*, “a plurality of S-shaped blades extending between and coupled to the first and second blade supports, wherein each of the S-shaped blades has a trailing edge bent in a forward direction with respect to a defined direction of rotation, and the trailing edge is generally free from the first and second blade supports.” For example, with reference to FIGS. 5 and 6, the present application discloses “the individual blades 210 are mounted between a center disk 212 serving as a first blade support and a wheel cone 214 with a central air inlet 216 serving as a second blade support.” Application, paragraph [0024]. Furthermore, the present application discloses “the trailing edge 218 of the blade 210 ... is bent in a forward direction with respect to the rest of the blade.” *Id.* Although the Applicants do not intend or suggest that the specification should be read into the claims, the Applicants stress that the specification and drawings provide context and meaning to the claims. In sharp contrast, the Weis reference teaches that the impeller blades or vanes 50 are coupled *only* to the conical face 44 of the disk 45. *See* Weis, FIG. 2. The Shinjiro reference discloses that the blades are *fixed* at both the leading and *trailing* edges via members 2 and 3. *See* Shinjiro, FIGS. 1, 3, 7, and 9. The Young reference also illustrates blades that are *fixed* at their *trailing* edge. *See* Young, FIG. 1. The other cited references also appear to be deficient for similar reasons. Accordingly, the cited references, taken alone or in hypothetical combination with one another, fail to teach or suggest the foregoing features of independent claim 19.

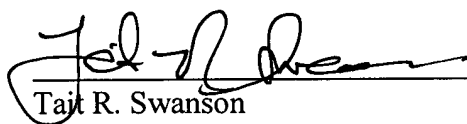
For at least these reasons, among others, the Applicants respectfully request allowance of all pending claims, including the newly added claims.

Conclusion

The Applicants respectfully submit that all pending claims should be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve any other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

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